

Appl. No. 09/840,055
Amdt. dated March 15, 2005
Reply to Office Action of Nov. 30, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): ~~An apparatus~~ computer-readable medium encoded with a computer program for generating a live component comprising:

- (a) a resource library;
- (b) a live component editor for allowing a user to edit said live component utilizing resources from said resource library;
- (c) a library of pre-built application modules;
- (d) a viewer generator for creating a live component viewer from said pre-built application modules directed by said live component editor; and
- (e) a component description generator for creating a live component description file directed by said live component editor.

Claim 2 (currently amended): The ~~apparatus~~ computer-readable medium according to claim 1, wherein said live component editor is a live component editor and simulator capable of simulating said live component.

Claim 3 (currently amended): The ~~apparatus~~ computer-readable medium according to claim 1, wherein said live component is downloaded from a server to a local system, wherein algorithms in said live component are executed on said local system.

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Claim 4 (currently amended): The ~~apparatus~~ computer-readable medium according to claim 1,
wherein said pre-built application modules include computer executable instructions
selected from the group consisting of:

- (a) compiled code;
- (b) assembled code; and
- (c) interpreted script.

Claim 5 (currently amended): The ~~apparatus~~ computer-readable medium according to claim 1,
wherein said live component viewer includes computer executable instructions selected
from the group consisting of:

- (a) compiled code;
- (b) assembled code; and
- (c) interpreted script.

Claim 6 (currently amended): The ~~apparatus~~ computer-readable medium according to claim 1,
wherein said live component description file includes live component viewer instructions.

Claim 7 (currently amended): The ~~apparatus~~ computer-readable medium according to claim 6,
wherein said live component viewer instructions include XML.

Claim 8 (currently amended): The ~~apparatus~~ computer-readable medium according to claim 6,
wherein said live component viewer instructions includes data links.

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Claim 9 (currently amended): The ~~apparatus~~ computer-readable medium according to claim 7,
wherein said XML is MathML.

Claim 10 (currently amended): The ~~apparatus~~ computer-readable medium according to claim 9,
wherein said MathML includes live MathML extensions.

Claim 11 (currently amended): The ~~apparatus~~ computer-readable medium according to claim 10,
wherein said live MathML extensions comprises at least one extension selected from the
group of:

- (a) a bi-directional equals operator;
- (b) an edit attribute indicating if a value is editable; and
- (c) a display attribute indicating a name and format for a display.

Claim 12 (currently amended): The ~~apparatus~~ computer-readable medium according to claim 1,
wherein said resource library includes at least one of the set of:

- (a) rules;
- (b) definitions;
- (c) default values; and
- (d) resources.

Claim 13 (original): A method for generating a live component comprising the steps of:

- (a) opening an initial live component with a live component editor;

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- (b) iteratively updating said live component by;
 - (i) selecting an operand for modification;
 - (ii) selecting a step from the group of steps consisting of:
 - (1) modifying the properties of said selected operand; and
 - (2) inserting an additional operation, selected from a library of pre-built application modules, that operates on said operand using predetermined rules that correspond to said additional operation;
- (c) saving the modified live component by:
 - (i) creating a live component viewer using said pre-built application modules directed by said rules based editor; and
 - (ii) creating a live component description file directed by said rules based editor.

Claim 14 (original): The method according to claim 13, wherein said live component editor is a live component editor and simulator.

Claim 15 (original): The method according to claim 13, wherein said initial live component is a default live component.

Claim 16 (original): The method according to claim 13, further including the step of downloading said live component from a server to a local system, wherein algorithms in said live component are executed on said local system.

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Claim 17 (original): The method according to claim 13, wherein said pre-built application modules include computer executable instructions selected from the group consisting of:

- (a) compiled code;
- (b) assembled code; and
- (c) interpreted script.

Claim 18 (original): The method according to claim 13, wherein said live component viewer includes computer executable instructions selected from the group consisting of:

- (a) compiled code;
- (b) assembled code; and
- (c) interpreted script.

Claim 19 (original): The method according to claim 13, wherein said live component description file includes live component viewer instructions.

Claim 20 (original): The method according to claim 13, wherein said live component viewer instructions include XML.

Claim 21 (original): The method according to claim 19, wherein said live component viewer instructions includes data links.

Claim 22 (original): The method according to claim 20, wherein said XML is MathML.

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Claim 23 (original): The method according to claim 22, wherein said MathML includes live MathML extensions.

Claim 24 (original): The method according to claim 23, wherein said live MathML extensions comprises at least one ~~one~~ extension selected from the group of:

- (a) a bi-directional equals operator;
- (b) an edit attribute indicating if a value is editable; and
- (c) a display attribute indicating a name and format for a display.

Claim 25 (original): The method according to claim 13, wherein said resource library includes at least one of the set of:

- (a) rules;
- (b) definitions;
- (c) default values; and
- (d) resources.